

PROACT Root Cause Analysis Methods

2-day Workshop

PROACT™ Root Cause Analysis (RCA) Methods were developed by Reliability Center Inc. to help companies in solving complex problems. These methods are very intuitive, focused, and take advantage of team's synergy to effectively:

- Classify problems/opportunities according to business impact - Opportunity Analysis (OA)
- Uncover physical, human and systemic root causes – PROACT RCA
- Develop and implement effective solutions – Implementation PLAN

These methods are ideally suited to solve Equipment and Process problems, but they can be applied to any problem.

Opportunity Analysis (OA)

The objective of the Opportunity Analysis is to clearly identify 20% of the repetitive problems that typically represent 80% of the company's losses. These problems are generally considered good candidates for RCA. This analysis is generally carried out by 2 or 3 people and consists of:

- Defining the area of concern
- Developing a process flow diagram of the defined area
- Identifying main failure modes (actual, not potential)
- Determining business impact of each failure mode
- Determining difficulty/cost of eliminating each failure mode
- Setting priorities for failure mode elimination

PROACT™ RCA

The objective of PROACT RCA is to uncover the root causes of any repetitive or sporadic problem. Our methodology follows the cause-and-effect trail from the failure back to its root causes; it is carried out by a team of 5-7 people and consists of:

- Selecting the analysis team
- Writing a concise definition of the problem
- Collecting data (position, people, parts, paper and paradigms – the 5 Ps)
- Identifying the historical failure modes and their correlation to maintenance interventions and operational parameters
- Analyzing the problem using a logic tree; this includes developing hypotheses and their verification. Most findings in an analysis lead to further data collection, more hypotheses and more verification. This loop is repeated many times until actionable root causes are uncovered
- Recommending actions to eliminate the root causes

The outcome of these analyses generally include: changes in maintenance and operating procedures, upgrades in PM and PdM programs and/or equipment/process modifications. These improvements provide exceptionally high Return-On-Investment.

Implementation Plan

The objective of the Implementation plan is to solve the problem, it is generally carried out by the same team that did the RCA and consists of:

- Developing the recommendations
- Determining their cost and benefit
- Prioritizing implementation of recommendations (Action Plan)
- Implementing recommendations
- Tracking results
- Optimizing solutions

Proven Methods

For many years, our alumni have been solving major industrial problems that increased production and reduced costs. The additional knowledge and motivation acquired by the team members creates a more proactive culture that invariably leads to more stable operations. “The successes” reduce the emergency workload of hourly and supervisory personnel, allowing more time for additional analysis that lead to further improvements.

Try it - You will be amazed at the results!

Workshop

The workshop is very interactive and covers:

- An introduction to Reliability
- The three methods outlined above
- Several real case studies that highlight the power of the methodologies and motivate the participants to achieve similar results
- Analysis of cases brought to the classroom by the participants, to be dissected and in some cases resolved

Every participant will receive: 1) a PROACT™ RCA Methods Manual that is an excellent reference for setting-up a Reliability program in your company, 2) a set of Job Aids that can be posted in job areas to encourage the use of these methods

Who should attend?

This workshop is primarily intended for Problem Solvers (engineers, technologists, analysts) involved in determining root causes of complex problems; they could be from any of the following functions:

Maintenance
Engineering

Operations
Process Control

Reliability
Quality Assurance

Managers intending to set-up a reliability program would benefit greatly from the insights gained in this course

Participants' Comments

"PROACT RCA Methods seminar ranks among the best training I have ever taken. It is excellent in terms of teaching practical techniques that can be applied as soon as you return to work"

Peter Girard, Maksteel

"PROACT RCA Methods workshop was excellent and provided ideas, tools, and inspiration"

Helmut Becker, Hendrickson International

"Using PROACT Root Cause Analysis at our site will pay huge dividends"

Murray Culham, Honda

"PROACT RCA methodology is a valuable asset that can greatly reduce maintenance costs and increase production"

Robin Gauthier, Toyota

"Tony Rodriguez was truly excellent as a course leader, one of the best. He is positive, open minded, encouraging and very knowledgeable"

Darren Holmes – Shell Canada

"The workshop is excellent and provides all the necessary knowledge to initiate a Reliability Program"

Robert Blain – Barrick Gold Corporation

Other Participating Companies Include

Algoma Steel, ATCO Electric, Bruce Power, Cardinal Power, EnCana, Epcor, Husky Injection Molding, Iron Ore Company, Michelin, Moa Nickel, Nova Chemicals, Owens Corning, Praxair, PT Inco, Sherritt International, Sita Canada, Sykes Canada, Tetra Pack, Toronto Transit Commission, Waterville TG, WestJet, Weston Bakeries

Instructor

Tony Rodriguez, P.Eng. is the founder of PEMMAX CONSULTANTS (est. 2002), a company dedicated to assist process and manufacturing companies in solving major equipment problems, process bottlenecks and maintenance management deficiencies. Prior to Pemmax, Tony worked for PricewaterhouseCoopers assisting companies with their maintenance management practices, using tools such as PROACT Root Cause Analysis (RCA), Reliability Centered Maintenance (RCM) and Total Productive Maintenance (TPM). Earlier in his career, Tony managed engineering, maintenance and process departments in various industries. Presently, Tony teaches PROACT RCA courses and facilitates problem resolution using all the above mentioned methodologies. Pemmax Consultants has a strategic alliance with Reliability Center Inc. to promote, teach and sell their courses and software in Canada.

Reliability Center Inc. (RCI)

RCI was established in Hopewell, Virginia in 1972 as a Research and Development arm of a major US corporation. In 1985, RCI became an independent company under the direction of the late Charles J. Latino, whose goal was to spread the reliability message to companies all over the world. RCI teaches companies how to improve Equipment and Process Reliability using **PROACT Root Cause Analysis** and **Human Error Reduction** methodologies. These methodologies and software are saving corporations millions of dollars every year.

Registration Form

Fees – PROACT™ Root Cause Analysis Methods Workshop

Individual participants: \$1,300.00 + 5% GST = \$1,365.00 CAD per person

Multiple participants (same company): \$1,200.00 + 5% GST = \$1,260.00 CAD per person

Pemmax GST registration: 13673 1726 RT0001

Note: Full refund for cancellations until 2 weeks prior to the workshop. Substitutions allowed anytime.

Participants:

Name (1) _____ Title _____ Email _____

Name (2) _____ Title _____ Email _____

Name (3) _____ Title _____ Email _____

Company _____ Division _____

Address _____

City _____ Province _____ Postal Code _____

Phone: _____ Fax: _____ Total amount payable \$ _____

Workshop

- Toronto, Ontario – April 23 & 24, 2009
- Toronto, Ontario – October 29 & 30, 2009

Preferred Payment Option

Purchase Order Cheque

Payable to Pemmax Consultants, please mail to:

PEMMAX CONSULTANTS
317 Amberwood Drive
Waterloo, Ontario, Canada, N2T 2E9

Alternative Payment Option

Visa MasterCard Amex

Contacts

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Workshop instructor: Tony Rodriguez arodriguez@pemmax.com